

AMMOANITA ROSEA, NEW GENUS AND NEW SPECIES
OF DEEP WATER TROCHAMMINIDAE,
FORAMINIFERIDA

George A. Seiglie and Mary B. Baker

Abstract.—*Ammoanita* Seiglie and Baker, new genus is described and distinguished by its lens-shaped test, acute periphery, and umbilical-extraumbilical aperture. *Ammoanita rosea* Seiglie and Baker, new species is also described; its distinguishing characteristics are: an acute but rarely keeled periphery, a thick test, and seven to eight chambers in the last whorl. An emended description of *Ammoanita trinitatensis* (Cushman and Jarvis) is included.

Most of the species of agglutinated foraminifers having a low trochospire, with an aperture on the umbilical side with no other *en évidence* morphological characteristics, have been included in the genus *Trochammina* Parker and Jones, 1859. Brönnimann, Zaninetti, and Whittaker (1983) indicate the necessity for a redefinition of this genus in the future. This has been done in part (e.g. Brönnimann and Whittaker 1983a, b). A group of Cretaceous and Jurassic species included in the genus *Trochammina* have common morphological characteristics, such as a relatively large number of chambers in the last whorl arranged in a low trochospire, which distinguish them from the Tertiary species of *Trochammina*. Among the Cretaceous species are *T. eilete* Tappan, 1957, *T. stefanssoni* Tappan, 1957, and *T. parallela* Cushman and Applin, 1947. Dain (1972) illustrated *T. kondaensis* Levina, 1972, a Jurassic species of this group from Siberia. *Trochammina gyroidiniformis* Krasheninnikov (1974) and *T. gyroides* Cushman and Waters (1927) are planoconvex Cretaceous species with a semicircular aperture, that probably should be included in a new and different genus.

We describe herein a new genus morphologically and probably phylogenetically close to *Trochammina*, Parker and Jones (1859), *Ammoanita*, and two species: *A. rosea*, n.

sp. and *A. trinitatensis* (Cushman and Jarvis, 1928) emended. The Cretaceous species *A. rosea* is the ancestor of the Paleocene *A. trinitatensis*.

Trochamminidae Schwager, 1877
Ammoanita, new genus

Type species.—*Ammoanita rosea*, n. sp.

Etymology.—From the Greek *ammos*, sand, and *Anita*, a feminine proper noun.

Description.—Test biconvex and trochospiral, with 7-10 chambers in last whorl; periphery acute, and may be keeled; surface finely agglutinated; aperture interiomarginal, umbilical-extraumbilical.

Age.—Santonian?, Campanian to Paleocene.

Differences from other genera.—The closest genus to *Ammoanita* is *Trochammina*, mainly the Jurassic and Cretaceous stock of *Trochammina*. *Ammoanita* has a more restricted umbilical area, is larger and more convex on both sides, has a higher trochospire, and a more acute periphery than the Cretaceous species of the genus *Trochammina*. It is distinguished from the Cenozoic species of *Trochammina* by the greater number of chambers in the last whorl and a more acute periphery.

Ammoanita includes two species with relatively short stratigraphic ranges, and sep-

arated morphologically from the species of the genus *Trochammina*.

Geographic distribution.—The species of this genus have been found in Late Cretaceous deep-waters of the Middle East, and the Paleocene deep-waters of West Africa, and Trinidad Antilles.

Ammoanita rosea, new species

Fig. 1a–c, 2a–c

Description.—Test biconvex, umbilicate and slightly more convex on umbilical side; last whorl composed of 7–8 chambers arranged in a trochospire; chambers semilunar on dorsal side, subtriangular on ventral side; sutures arched on dorsal side, sigmoidal on umbilical side; periphery acute, rarely weakly keeled; wall agglutinated with a finely grained surface; aperture an interior-marginal, umbilical-extraumbilical slit. Size 0.50–0.79 mm in diameter.

Age.—Santonian?, Campanian to Early Maestrichtian.

Type specimens.—The holotype is illustrated in Fig. 1a–c. The holotype and paratype are deposited in the National Museum of Natural History, Washington, D.C. (USNM 00005003 and USNM 00005004), respectively.

Type locality.—The holotype and paratype were found between 7540 to 7580 feet in the Wadi Rafash-lx well in Oman, at approximately 23°32'N, 56°07'E.

Differences from other species.—*Ammoanita rosea* is distinguished from the closest related species, *A. trinitatensis*, by the lower number of chambers in the last whorl, the thicker test and a periphery which is rarely keeled.

Paleoenvironment.—This species has been found, to date, in the Middle East. It is associated with a lower bathyal to abyssal, dominantly agglutinated foraminiferal assemblage, which includes: *Allomorphina trigona* Reuss, *Dorothia bulleta* (Carsey), *Clavulina gaultina* Morozova, *C. californica* (Mallory), *Plectina conversa* Jedlitsch-

ka, *Gaudryina pyramidata* Cushman, *G. aissana* ten Dam and Sigal, *Gyroidina globulosa* (Hagenow), *Glomospira charoides* (Jones and Parker), *Rzehakina epigona* (Rzehak), *Melonis pompilioides* (Fichtell and Moll), *Marssonella oxycona* (Reuss), *Quadrimorphina trochoides* (Reuss), *Hormosina globulifera* Brady, *Trochammina gyroidiformis* Krasheninnikov, *Schizammina* sp., *Ammobaculites* sp., *Haplophragmoides* sp., *Bathysiphon* sp. and *Psammosphaera* sp.

Ammoanita trinitatensis

(Cushman and Jarvis, 1928),

new combination

Fig. 3a–c

Trochammina trinitatensis Cushman and Jarvis 1928:96.

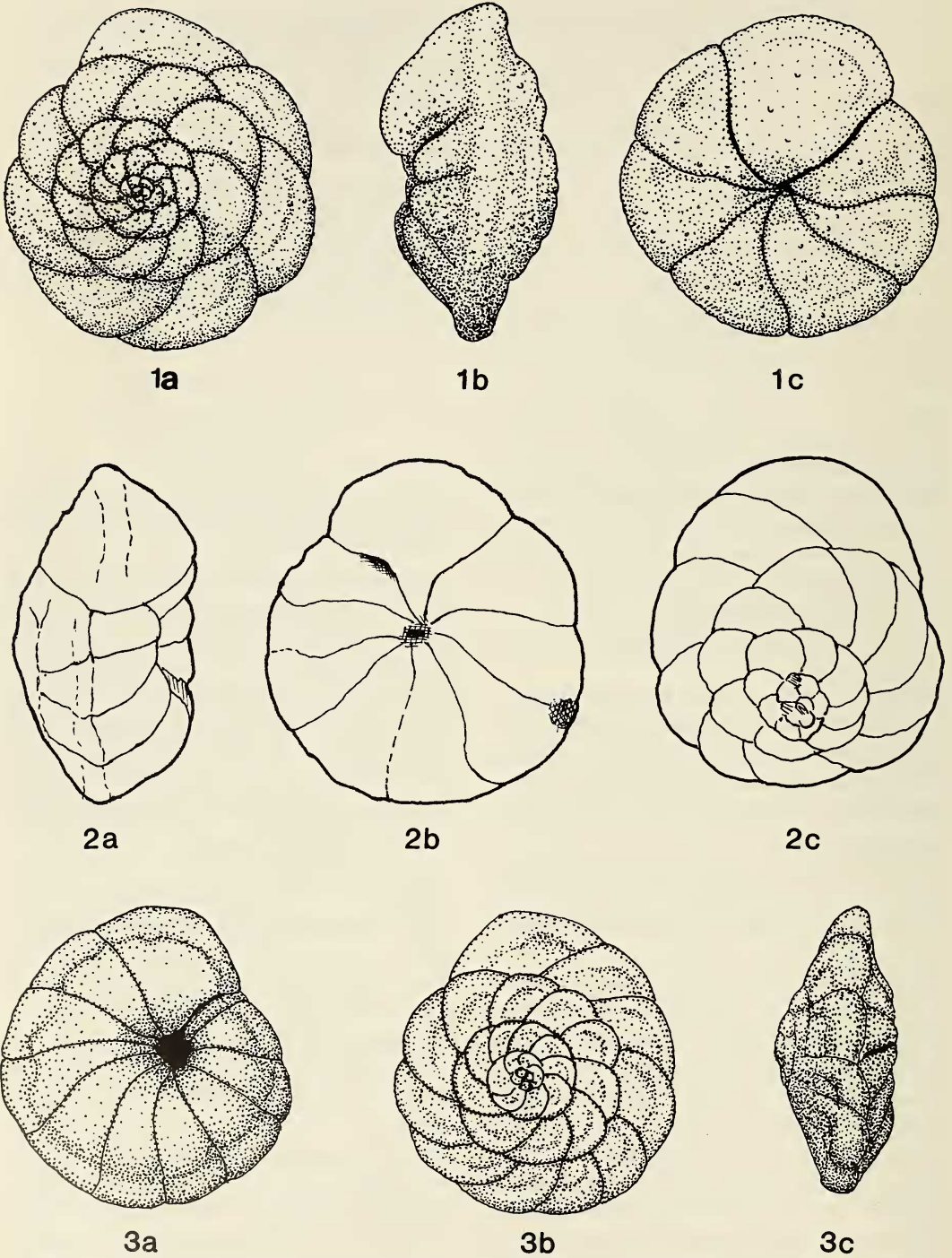
Description.—Test equally biconvex and umbilicate; chambers arranged in a trochospire with 9 to 13 chambers in last whorl; chambers semilunar on dorsal side, subtriangular on ventral side; sutures arched on dorsal side, radial to sigmoidal on ventral side; periphery keeled; wall agglutinated, surface fine-grained; aperture an interior-marginal, umbilical-extraumbilical slit. Size 0.40–0.73 mm in diameter.

Age.—Paleocene.

Locality.—The specimens used for this study were found in the Bekuma-lx well offshore Cameroon, between 6610 and 6640 feet. The specimen illustrated is deposited in the National Museum of Natural History, Washington, D.C. (USNM 00005005).

Geographic distribution.—This species occurs in Trinidad (Antilles) and off West Africa.

Paleoenvironment.—*Ammoanita trinitatensis* is associated with a lower bathyal-abyssal foraminiferal assemblage including: *Clavulina californica* (Mallory) *Rzehakina epigona* (Rzehak), *Trochammina globigeriniformis* Parker and Jones, *Hormosina globulifera* Brady, *Haplophragmoides* sp., *H. walteri* (Grzybowski), *Psammosphaera*



Figs. 1-2. *Ammonoites rosea*: 1a-c, Wadi Rafash-lx well, Oman, 7540-7580 feet, maximum diameter 0.60 mm, holotype, USNM 00005003; 2a-c, Wadi Rafash-lx well, Oman, 7840-7870 feet, maximum diameter 0.47 mm, paratype, USNM 00005004; Early Campanian.

Fig. 3a-c. *Ammonoites trinitatis* (Cushman and Jarvis) Bekuma-lx well, Cameroon, 6610-6640 feet, maximum diameter 0.54 mm, USNM 00005005; Paleocene.

sp., *Spiroplectammina spectabilis* (Grzybowski), and *Bathysiphon* sp.

Acknowledgments

Thanks are due to Drew Haman and Charles A. Ross from Chevron USA, Inc., Southern Region Houston, Texas, for their comments on this paper and to Chevron USA, Inc. and Chevron Overseas Petroleum, Inc. for permission to publish this material.

Literature Cited

- Brönnimann, P., and J. E. Whittaker. 1983a. *Deuterammina* (*Lepidodeuterammina*) subgen. nov., and a redescription of *Rotalina ochracea* Williamson (Protozoa: Foraminiferida).—Bulletin of the British Museum (Natural History) Zoology 45(5):233–238.
- , and ———. 1983b. A lectotype for *Deuterammina* (*Deuterammina*) *rotaliformis* (Heron-Allen & Earland) and new trochamminids from E. Ireland.—Bulletin of the British Museum (Natural History) Zoology 45(7):347–358.
- , ———, and J. E. Whittaker. 1983. On the classification of the Trochamminacea (Foraminiferida).—Journal of Foraminiferal Research 13(3):202–219.
- , and E. R. Applin. 1947. Some new Foraminifera from the American Cretaceous.—Contributions from the Cushman Laboratory for Foraminiferal Research 23(3):53–56.
- , and P. W. Jarvis. 1928. Cretaceous Foraminifera from Trinidad.—Contributions from the Cushman Foundation for Foraminiferal Research 4(4):85–103.
- , and J. A. Waters. 1927. Some arenaceous Foraminifera from the Cretaceous of Texas.—Contributions from the Cushman Laboratory for Foraminiferal Research 2(4):81–85.
- Dain, L. G. 1972. Foraminiferii Verkhneiorshikh Otloshchenii Sapadnoi Sibiri.—Trudi Vsesoiosnogo Neftianogo Nauchno-Isspedovatel'skogo, Geologorasvedochnogo Instituta 317:25 op., pls. 1–56.
- Krashenninikov, V. A. 1974. Upper Cretaceous benthonic agglutinated foraminifera, Deep Sea Drilling Project Leg 27. Pp. 631–661 in P. T. Robinson and H. M. Bolli, eds., Initial Reports of the Deep Sea Drilling Project, 27. Washington, D.C., U.S. Government Printing Office.
- Parker, W. K., and T. R. Jones. 1859. On the nomenclature of the Foraminifera Part II. On the species enumerated by Walker and Montagu.—Annals and Magazine of Natural History (3)4: 333–351.
- Schwager, C. 1877. Quadro del proposto sistema de classificazione dei foraminiferi con guscio.—Comitato Geologico Italia, Bollettino 8(1–2):18–27.
- Tappan, H. 1957. New Cretaceous index Foraminifera from northern Alaska.—United States National Museum Bulletin 215:201–222.

Chevron U.S.A., Inc., Southern Region,
P.O. Box 1635, Houston, Texas 77251.